Are You Average??? Math/ Science Investigation

Rationale:

You are going to be completing a survey by collecting data from your peers to determine whether or not you are an average eighth grade student. You will analyze this data through data tables, bar graphs, histograms, pie graphs, stem and leaf plots, scatter plots, and box- and- whisker plots. You will also compare data by using measures of central tendencies (mean, median, and mode) and measures of spread (range, and percentiles). You will draw conclusions based on the information from your sample to determine population data and to determine whether or not you yourself are average.

Expectations:

Upon completion of this project, you will know and be able to

do:

* Use the process of statistical investigation
* Analyze data
* Compare data
* Determine relationships among data
* Distinguish between samples and populations
* Use information from samples to make conclusions about populations

Rubric:

|  |  |  |  |
| --- | --- | --- | --- |
| Grade “A”: | Grade “B”: | Grade “C”: | Grade “D”: |
| ll data displays are complete (2 of each of the following(one hand drawn, one computer generated): pie graph, bar graph, box and whisker, stem and leaf, frequency/percent table, histogram, scatter plot, and mean, median, mode and range for all that apply). The displays are mathematically accurate, and presented in an attractive manner. All components of the lab report are complete. The final product contains no errors (spelling, grammar, etc.). | Overall, all data displays are complete. The displays may contain a few mathematically errors. Displays are presented in an attractive manner. All components of the lab report are complete. The final product may contain few errors | Overall, all data displays may be incomplete. The displays contain a few mathematically errors. Displays are presented in a somewhat attractive manner. All components of the lab report may not be complete. The final product contains errors. | Overall, all data displays are incomplete. The displays contain many mathematically errors. Displays are presented in an unattractive manner. All components of the lab report are not complete. The final product contains errors. (Lacks effort). |

Note: Ten points are deducted for every day late.

Conclusion Questions:

1. Based on your analysis, what ten conclusions can you draw?
2. Is it appropriate to use every type of data display for all types of data? Give examples of why or why not.
3. What would we have to do next to find out if you are an average Goff student?
4. Are you an average student? Prove your answer.
5. Which sampling method was used in this project? Was this a good method?